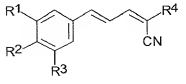
We claim:

1. A compound of Formula I, and salts, solvates or hydrates thereof:



I

wherein

R^1 and R^2 are each independently selected from the group consisting of H, OH, $C_{1\text{-}6}$alkyl, $C_{1\text{-}6}$alkoxy, NH_2, NH-$C_{1\text{-}6}$alkyl, N($C_{1\text{-}6}$alkyl)($C_{1\text{-}6}$alkyl), SH, S-$C_{1\text{-}6}$alkyl, O-Si($C_{1\text{-}6}$alkyl)($C_{1\text{-}6}$alkyl)($C_{1\text{-}6}$alkyl), NO_2, CF_3, OCF_3 and halo;

R^3 is selected from the group consisting of H, OH, $C_{1\text{-}6}$alkyl, $C_{1\text{-}6}$alkoxy, NH_2, NH-$C_{1\text{-}6}$alkyl, N($C_{1\text{-}6}$alkyl)($C_{1\text{-}6}$alkyl), SH, S-$C_{1\text{-}6}$alkyl, O-Si($C_{1\text{-}6}$alkyl)($C_{1\text{-}6}$alkyl)($C_{1\text{-}6}$alkyl), NO_2, halo and CH_2-S-$(CH_2)_n$ Ar;

R^4 is selected from the group consisting of C(X)R^5, SO_3Ar, NH_2, NH-$C_{1\text{-}6}$alkyl, N($C_{1\text{-}6}$alkyl)($C_{1\text{-}6}$alkyl), P(O)$(OH)_2$, P(O)$(OC_{1\text{-}6}$alkyl$)_2$, and C(NH_2)=C$(CN)_2$;

X is selected from O,S, NH and N-$C_{1\text{-}6}$alkyl;

R^5 is selected from the group consisting of NH_2, OH, NH$(CH_2)_p$Ar, NH$(CH_2)_p$OH, $(CH_2)_pOC_{1\text{-}6}$alkyl, $C_{1\text{-}6}$alkyl, $C_{1\text{-}6}$alkoxy, $NHNH_2$, NHC(O)NH_2, NHC(O)$C_{1\text{-}6}$alkoxy, N-morpholino and N-pyrrolidino; and

Ar is an aromatic or heteroaromatic group, unsubstituted or substituted with 1-4 substituents, independently selected from the group consisting of OH, $C_{1\text{-}6}$alkyl, $C_{1\text{-}6}$alkoxy, NH_2, NH-$C_{1\text{-}6}$alkyl, N($C_{1\text{-}6}$alkyl)($C_{1\text{-}6}$alkyl), SH, S-$C_{1\text{-}6}$alkyl, NO_2, CF_3, OCF_3 and halo;

n is 0 to 4; and

p is 1-4.

2. The compound according to claim 1, wherein R^1 and R^2 are each independently selected from the group consisting of H, OH, $C_{1\text{-}4}$alkyl, $C_{1\text{-}$

$_4$alkoxy, NH_2, NH-C_{1-4}alkyl, SH, S-C_{1-4}alkyl, O-Si(C_{1-4}alkyl)(C_{1-4}alkyl)(C_{1-4}alkyl), NO_2, CF_3, OCF_3 and halo.

3. The compound according to claim 2, wherein R^1 and R^2 are each independently selected from the group consisting H, OH, OCH_3, O-Si$(CH_3)_2(^tBu)$, S-Me, SH and NO_2.

4. The compound according to claim 3, wherein R^1 and R^2 are both OH or R^1 and R^2 are both OCH_3.

5. The compound according to claim 4, wherein R^1 is OCH_3 and R^2 is OH.

6. The compound according to claim 1, wherein R^3 is selected from the group consisting of H, OH, C_{1-4}alkyl, C_{1-4}alkoxy, NH_2, NH-C_{1-4}alkyl, N(C_{1-4}alkyl)(C_{1-4}alkyl), SH, S-C_{1-4}alkyl, NO_2 and halo.

7. The compound according to claim 6, wherein R^3 is selected from the group consisting of H, OH, OCH_3, SH, SMe, NO_2 and halo.

8. The compound according to claim 7, wherein R^3 is selected from the group consisting of H, OH and OCH_3.

9. The compound according to claim 1, wherein R^4 is selected from the group consisting of $C(X)R^5$ and $C(NH_2)=C(CN)_2$.

10. The compound according to claim 9, wherein R^4 is $C(X)R^5$.

11. The compound according to claim 10, wherein X is selected from the group consisting of O and S.

12. The compound according to claim 10, wherein R^5 is selected from the group consisting of NH_2, OH, $NH(CH_2)_pAr$, $NH(CH_2)_pOH$ and C_{1-4}alkoxy.

13. The compound according to claim 12, wherein p is 1-3.

14. The compound according to claim 13, wherein R^5 is selected from the group consisting of NH_2, OH, $NH(CH_2)_pAr$, $NH(CH_2)_pOH$ and OCH_3.

15. The compound according to clam 14, wherein p is 1-2.

16. The compound according to claim 1, wherein Ar is an unsubstituted phenyl group or a phenyl group substituted with 1-4 substituents optionally selected from the group consisting of OH, C_{1-6}alkyl, C_{1-6}alkoxy, NH_2, NH-C_{1-6}alkyl, N(C_{1-6}alkyl)(C_{1-6}alkyl), SH, S-C_{1-6}alkyl, NO_2, CF_3, OCF_3 and halo.

17. The compound according to claim 14, wherein Ar is an unsubstituted phenyl group or a phenyl group substituted with 1-4 substituents optionally selected from the group consisting of OH, C_{1-6}alkyl, C_{1-6}alkoxy, NH_2, NH-C_{1-6}alkyl, N(C_{1-6}alkyl)(C_{1-6}alkyl), SH, S-C_{1-6}alkyl, NO_2, CF_3, OCF_3 and halo.

18. The compound according to any of claims 16 or 17, wherein Ar is an unsubstituted phenyl group or phenyl group substituted with 1-2 substituents optionally selected from the group consisting of OH, C_{1-4}alkyl, C_{1-4}alkoxy, NH_2, NH-C_{1-4}alkyl, N(C_{1-4}alkyl)(C_{1-4}alkyl), SH, S-C_{1-4}alkyl, NO_2, CF_3, OCF_3 and halo.

19. The compound according to claim 18, wherein Ar is an unsubstituted phenyl group or phenyl group substituted with 1-2 substituents optionally selected from the group consisting of OH, OCH_3, NH_2, $NHCH_3$, $N(CH_3)_2$, SH, SCH_3, CF_3, OCF_3 and halo.

20. The compound according to claim 19, wherein Ar is selected from the group consisting of phenyl and 3,4-dihydroxyphenyl.

21. The compound according to claim 1, selected from the group consisting of:

(E,E)-2-(benzylamido)-3-styrylacrylonitrile (CR1);
(E,E)-2-(benzylamido)-3-(3,4-dimethoxystyryl)acrylonitrile (CR2);
(E,E)-2-(benzylamido)-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR3);
(E,E)-2-(benzylamido)-3-(3,4-dihydroxystyryl)acrylonitrile (CR4);
(E,E)-2-(phenylethylamido)-3-(3,4-dimethoxystyryl)acrylonitrile (CR5);
(E,E)-2-(phenylethylamido)-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR8);
(E,E)-2-(phenylpropylamido)-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR9);
(E,E)-2-(3,4-dihydroxybenzylamido)-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR11);
(E,E)-2-thioacetamido-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR12);
(E,E)-2-acetamido-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR13);
(E,E)-2-carboxy-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR14);
(E,E)-2-carbomethoxy-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR15);
(E,E)-2-acetamido-3-[3,4-bis(t-butyldimethylsilyloxystyryl)]acrylonitrile(CR16);
(E,E)-2-acetamido-3-(3,4-dihydroxystyryl)acrylonitrile (CR17);
(E,E)-2-(benzylamido)-3-(3,4-bis(t-butyldimethylsilyloxystyryl))acrylonitrile (CR18);
(E,E)-2-(3,4 dihydroxybenzylamido)-3-styrylacrylonitrile (CR19);
(E,E)-2-(3,4 dihydroxybenzylamido)-3-[3,4-bis(t-butyldimethylsilyloxystyryl)]acrylonitrile (CR20);
(E,E)-2-(3,4 dihydroxybenzylamido)-3-(3,4-dihydroxystyryl)acrylonitrile (CR21);

(E,E)-2-(β-ethanolamido)-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR24);

(E,E)-2-(benzylamido)-3-(4-nitrostyryl)acrylonitrile (CR27);

(E,E)-2-(3,4-dihydroxybenzylamido)-3-(4-nitrostyryl)acrylonitrile(CR28); and

(E,E)-2-(1-amino-2,2-dicyanoethenyl)-3-(4-nitrostyryl)acrylonitrile (CR29).

22. The compound according to claim 21, selected from the group consisting of:

(E,E)-2-(benzylamido)-3-styrylacrylonitrile (CR1);

(E,E)-2-(benzylamido)-3-(3,4-dimethoxystyryl)acrylonitrile (CR2);

(E,E)-2-(benzylamido)-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR3);

(E,E)-2-(benzylamido)-3-(3,4-dihydroxystyryl)acrylonitrile (CR4);

(E,E)-2-(phenylethylamido)-3-(3,4-dimethoxystyryl)acrylonitrile (CR5);

(E,E)-2-(phenylpropylamido)-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR9);

(E,E)-2-(3,4-dihydroxybenzylamido)-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR11);

(E,E)-2-thioacetamido-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR12);

(E,E)-2-acetamido-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR13);

(E,E)-2-carboxy-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR14);

(E,E)-2-carbomethoxy-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR15);

(E,E)-2-acetamido-3-(3,4-dihydroxystyryl)acrylonitrile (CR17);

(E,E)-2-(3,4 dihydroxybenzylamido)-3-styrylacrylonitrile (CR19);

(E,E)-2-(3,4 dihydroxybenzylamido)-3-(3,4-dihydroxystyryl)acrylonitrile (CR21); and

(E,E)-2-(β-ethanolamido)-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR24).

23. The compound according to claim 22, selected from the group consisting of:

(E,E)-2-(benzylamido)-3-(3,4-dihydroxystyryl)acrylonitrile (CR4);

(E,E)-2-(3,4-dihydroxybenzylamido)-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR11);

(E,E)-2-acetamido-3-(3,4-dihydroxystyryl)acrylonitrile (CR17);

(E,E)-2-(3,4 dihydroxybenzylamido)-3-styrylacrylonitrile (CR19);

(E,E)-2-(3,4 dihydroxybenzylamido)-3-(3,4-dihydroxystyryl)acrylonitrile (CR21); and

(E,E)-2-(β-ethanolamido)-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR24).

24. The compound *(E,E)*-2-(benzylamido)-3-(3,4-dihydroxystyryl) acrylonitrile (CR4).

25. The compound *(E,E)*-2-(3,4-dihydroxybenzylamido)-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR11).

26. The compound *(E,E)*-2-(3,4-dihydroxybenzylamido)-3-(3,5-dimethoxy-4-hydroxystyryl)acrylonitrile (CR11).

27. A composition comprising a compound according to claim 1 in admixture with a pharmaceutically acceptable diluent or carrier.

28. A method of modulating cell proliferation comprising administering an effective amount of a compound of claim 23 to modulate cell proliferation to a cell or animal in need thereof.

29. A method of inhibiting cell proliferation comprising administering an effective amount of a compound of claim 23 to inhibit cell proliferation to a cell or animal in need thereof.

30. The method of claim 29, wherein the cell proliferation that is inhibited is cancer cell proliferation.

31. A method of treating cancer comprising administering to an animal in need thereof an effective amount of a compound of claim 23.

32. The method of claim 30 or 31 wherein said cancer is a hematopoietic cell cancer.

33. The method of claim 30 or 31 wherein said cancer is a leukemia, a lymphoma, a myeloma or a carcinoma.

34. The method of claim 33 wherein said leukemia is acute lymphoblastic leukemia, aggressive Philadelphia+ leukemia, acute myelocytic leukemia, chronic myeloid leukemia, chronic lymphocytic leukemia or juvenile myelomonocyte leukemia.

35. The method of claim 34 wherein said leukemia is acute lymphoblastic leukemia.

36. A method of modulating cell proliferation comprising administering an effective amount of a compound capable of modulating cell proliferation according to claim 1 or a composition of claim 27 to a cell or animal in need thereof.

37. A method of inhibiting cell proliferation comprising administering an effective amount of a compound capable of inhibiting cell proliferation

according to claim 1 or a composition according to claim 27 to a cell or animal in need thereof.

38. A method of inhibiting cancer cell proliferation comprising administering an effective amount of a compound capable of inhibiting cancer cell proliferation according to any one of claim 1 or a composition according to claim 27 to a cell or animal in need thereof.

39. A method of treating cancer comprising administering an effective amount of a compound capable of inhibiting cancer cell proliferation according to claim 1 or a composition according to claim 27 to a cell or animal in need thereof.

40. A method according to claim 38 or 39 wherein said cancer is a hematopoietic cell cancer.

41. A method according to claim 38 or 39 wherein said cancer is a leukemia, a lymphoma, a myeloma or a carcinoma.

41. A method according to claim 41 wherein said leukemia is acute lymphoblastic leukemia, aggressive Philadelphia+ leukemia, acute myelocytic leukemia, chronic myeloid leukemia, chronic lymphocytic leukemia or juvenile myelomonocyte leukemia,

43. A method according to claim 42 wherein said leukemia is acute lymphoblastic leukemia.